Test Plan Prototype 2

To: Professor Pisano

From: Addison Dolido, Erin Dorsey, Saransh Kothari, Yuran Shi, Kenny Zheng

Team: 21 - IoT Kitchen

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Subject: Test Plan for Prototype 2

1.0 Application Navigation

1.1 Equipment:

- Device - Android Phone
- IoT Kitchen Android Application

1.2 Setup:

- Open up IoT_Kitchen Android Application
- Pair to Bluetooth

1.3 Test Description:

- Check that navigation bar will includes the following: Device Screen, Cook and Recipes
- Click Recipes and select Peanut Butter Cups
- Select Cook and check that page includes the following: instructions, procedure, unit and weight

1.4 Measurable Criteria:

- Mobile Application does not crash **(Yes/No)**
- Each navigation bar shows a new screen **(Yes/No)**
- Recipes shows recipe you wish to make **(Yes/No)**
- RECIPES directs you over to COOK **(Yes/No)**

2.0 Natural Language Understanding Change Recipe

2.1 Equipment:

- Device - Computer
- Device - Android Phone
- IoT Kitchen Android Application
- iotk-nlu-test Dialogflow Console
- Google Assistant Emulator
- IotKitchen-NLU-Test Google Firebase Cloud Firestore Database Console

2.2 Setup:

- On computer, load Dialogflow console (https://dialogflow.cloud.google.com) and launch Google Assistant emulator
- On computer, load Firebase console(https://console.firebase.google.com/u/0/project/iotkitchen-nlu-test/database/firestore/data) and navigate to demoRecipe document
- Load IoTKitchen application on Android phone and navigate to recipe page

2.3 Test Description:

- Reference the Firebase console and record the database values for PeanutButterCups.instruction.step2 and PeanutButterCups.ingredient.i2
- Initialize 'changeInstruction' intent with the phrase: "Change second instruction"
- Initialize 'changeInstruction - Ingredient' intent with the phrase: "Ingredient is crunchy peanut butter"
- Initialize 'changeInstruction - Number' intent with the phrase: "Number is 2"
- Initialize 'changeInstruction - Procedure' intent with the phrase: "Procedure is melt peanut butter and add to bowl"
- Initialize 'changeInstruction - Weight' intent with the phrase: "Weight is 120"
- Initialize 'changeInstruction - Update' intent with the phrase: "Update ingredient"
- Reference the Firebase console and record the database values for PeanutButterCups.instruction.step2 and PeanutButterCups.ingredient.i2
- Refresh Peanut Butter Cups recipe on IoT Kitchen application and record value for ingredient 2 and step 2

2.4 Measurable Criteria:

- Module has response for all phrases **(Yes/No)**
- Intent changes the correct database field **(Yes/No)**
- Intent changes field to match user input **(Yes/No)**
- Database changes are reflected on application after 1 refresh **(Yes/No)**
- Module does not crash **(Yes/No)**

3.0 Temperature Sensor - Application Integration

3.1 Equipment:

- Device - Android Phone
- IoT Kitchen Android Application
- Temperature sensor prototype
    - K-type thermocouple
    - MAX 31856 amplifier
    - LCD display
    - Arduino Micro
    - Breadboard

- HC-05 bluetooth module
- USB to micro USB
- Computer

3.2 Setup:

- Plug in the temperature sensor into a computer.
- Start the phone application

3.3 Test Description:

- Go to the recipe page on the phone app.
- View and record the temperature displayed on the LCD.
- Confirm that once the temperature displayed on the LCD is greater than 25 C that the temperature is sent and displayed in the application.

3.4 Measurable Criteria:

- LCD displays the correct temperature **(Yes/No)**
- App displays and updates the same temperature as that on the LCD **(Yes/No)**